

FOUR QUEENSLAND FISHES.

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(Contributions from the Australian Museum.)

(Plates XXVII to XXX.)

THE four species here described and figured have hitherto been only very briefly characterised, and their recognition has been a matter of some little difficulty. *Pomacentrus apicalis*, De Vis, and *Cantherines brunneus*, Castelnau, have not been recognised since they were originally described over thirty years ago.

FAMILY POMACENTRIDÆ.

GENUS POMACENTRUS, Lacépède.

POMACENTRUS APICALIS, de Vis.

(Plate XXVII.)

Pomacentrus apicalis, De Vis, Proc. Linn. Soc. N. S. Wales, ix, 1885, p. 874.

D. xiii/16; A. ii/13; P. 20; V. i/5; C. 15; L. lat. 20; 27 rows of scales between the operculum and the hypural joint; L. tr. $3\frac{1}{2}$ /11. Depth before the ventrals 2 into the length of the hypural joint; head 3.3 in the same. Eye slightly narrower than the interorbital width, as long as the snout, and 3.5 in the head.

Body short and deep. Head slightly longer than deep. Snout obtusely pointed, the maxilla reaching slightly beyond the anterior margin of the eye. Suborbital strongly denticulate on its postero-inferior margin. Preoperculum denticulate on its hinder limb, the angle rounded. Operculum with a small flat spine. Head, body, and vertical fins closely covered with scales, the edges of which are minutely ciliated; they extend forward to between the nostrils and cover the greater part of the suborbital bone, leaving only the end of the snout naked. Nostril a little nearer the eye than the end of the snout. Dorsal originating above the end of the operculum; the spines increase gradually in length backwards, and there is no indentation between the spinous and soft dorsals; the soft dorsal angular, its median rays longest. Second anal spine as long as the distance between the preoperculum and the snout, and longer than the dorsal spines; soft portion of fin rounded. Caudal bifurcate, the upper lobe longer than the lower. First ventral ray filamentous, reaching the second anal spine.

Colour.—After preservation in weak alcohol, the general colour is dark coffee brown, with indistinct darker bases to the scales. Most of the scales of the back, side, and soft dorsal with a minute pale spot; the scales on the lower portion of the operculum and the base of the pectoral each with larger pale bluish spots. A row of light infraorbital spots. Dorsal fins with a broad orange margin which is most intense on the soft portion; two irregular blue streaks between each of the third to last spines; a large black blotch between the upper portion of the second and third spines. Tip of the upper caudal lobe bright orange. Soft dorsal, caudal, anal, pectorals and ventrals blackish, the spines of the anal and ventrals light blue.

Described from a specimen 115 mm. long from the snout to the end of the middle caudal rays. It agrees better with the second specimen referred to by de Vis than with that upon which he bases his description.

Loc.—Holborn Is., off Port Denison, Queensland; collected by Mr. E. H. Rainford.

FAMILY TEUTHIDIDÆ.

GENUS TEUTHIS, Linné.

Hepatus, Gronow, Zoophyl., 1763, p. 113—nonbinomial. See Jordan, Genera Fishes, 1917, p. 20.
Teuthis, Linné, Syst. Nat., 12th ed., 1766, p. 23 (*T. hepatus*, Linné). *Id.*, Jordan, *loc. cit.*, p. 23.

TEUTHIS GRAMMOPTILUS, Richardson.

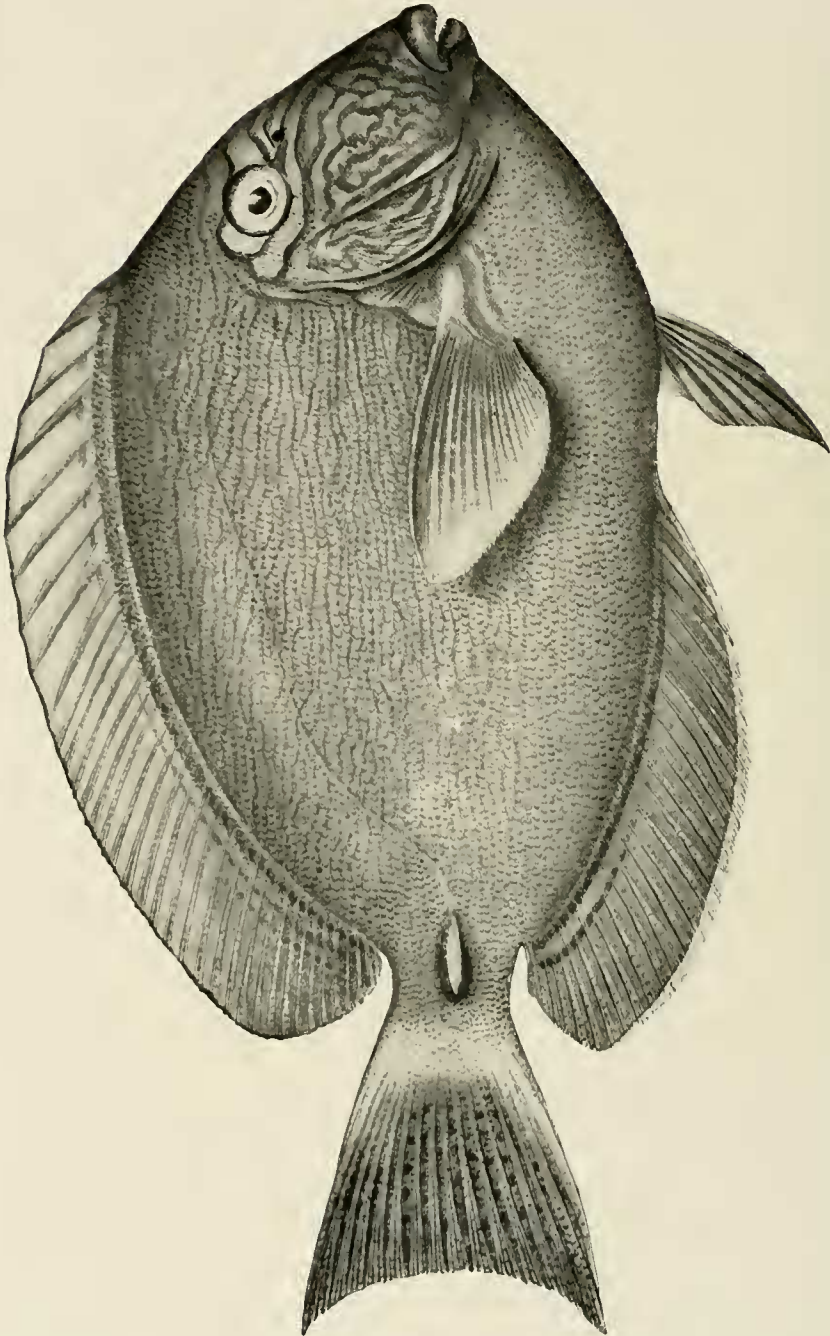
(Plate XXVIII.)

Acanthurus grammoptilus, Richardson, Ann. Mag. Nat. Hist., xi, 1842, p. 176. *Id.*, Günther, Brit. Mus. Cat. Fish., iii, 1861, p. 335. *Id.*, Macleay, Proc. Linn. Soc. N. S. Wales, ii, 1878, p. 354, and v, 1881, p. 528. *Id.*, Klunzinger, Sitzb. Akad. Wiss. Wien, lxxx, i, 1879, p. 393.

D. ix/27; A. iii/25; P. 17; V. i/5; C. 16. Depth before the ventrals 1.9 in the length to the hypural joint; head 3.5 in the same. Eye 2.3 in its distance from the upper lip, and 3.9 in the head; interorbital space wider than the eye, 3 in the head. Last dorsal spine 1.5, eighteenth dorsal ray 1.9 in the head. Pectoral 1.04, ventral 1.2 in the head.

The profile from the snout to the dorsal fin is obliquely convex, the forehead before the eyes forming an obtuse angle between the contours of the snout and the nape. Opercles oblique; preopercular border and the whole of the operculum striated. Nostrils approximate, the anterior much larger than the

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TEUTHIS GRAMMOPTILUS, Richardson.

A. R. McCulloch, del.

posterior, which is close to the border of the eye. Teeth depressed, their margins rounded and uniformly lobulate; sixteen in the upper jaw. The exposed surfaces of the clavicle and supraclavicle are striated.

The greater part of the body is covered with small, strongly ctenoid scales, which become cycloid on the breast and abdomen: head-scales deeply embedded and cycloid. Lateral line arched anteriorly, thence oblique to below the hinder third of the soft dorsal, whence it descends to the middle of the caudal peduncle. Caudal spine strong, its anterior free portion longer than the posterior.

Dorsal commencing above the middle of the operculum, the spines increasing evenly in length to the last. The margin of the fin is evenly rounded, and the rays decrease evenly backwards to the eighteenth, after which they become rapidly shorter. Anal commencing below the posterior dorsal spines, and terminating a trifle behind the last ray; its margin rounded. Ventrals acutely pointed, and reaching the base of the first anal ray. Caudal damaged, emarginate (the lobes probably produced).

Colour.—Body brown before preservation, tinged with yellow. The greater part of the sides covered with narrow dark-brown lines, which are largely horizontal, irregular and anastomosing. Ventral surface uniform brown. Some broad blue bands around the eye enclose light areas. Cheeks, opercles, shoulder, and base of pectoral brown, closely covered with reticulating darker brown stripes. Dorsal orange yellow, becoming darker posteriorly; a broad blue band along the entire base and a second darker one above it posteriorly; a narrow black margin. Anal dark greenish brown, with a pale blue border, with indications of two blue stripes near the base posteriorly. Ventrals dark brown; pectorals yellowish, darker between the rays. Caudal dark, with many round darker spots between the rays; the base near the caudal peduncle light in colour; a blackish area round the caudal spine.

Described and figured from a specimen 218 mm. long, from the Clarence River, New South Wales.

Variation.—Two smaller examples from Masthead Island, 150 and 159 mm. long, are very similar, though their markings are not so distinct as in the larger example: in one, the vermiform markings on the body are much broader and less numerous than in the other. The dorsal and anal fins are marked with about six longitudinal dark stripes, and are darker anteriorly than in the specimen figured. The white area around the caudal peduncle is more sharply defined anteriorly, and the extreme margin of the fin is white.

Locs.—Clarence River, New South Wales; presented to the Australian Museum by the Fisheries Department of New South Wales. Masthead Island, off Port Curtis, Queensland; coll. A. R. McCulloch. Specimens are in the Macleay Museum from Port Darwin, Northern Territory.

FAMILY BLENNIIDÆ.

GENUS NOTOGRAPTUS, Günther.

NOTOGRAPTUS GUTTATUS, Günther.

(Plate XXIX.)

Notograptus guttatus, Günther, Ann. Mag. Nat. Hist. (3), xx, 1867, p. 64. *Id.*, Macleay, Proc. Linn. Soc. N. S. Wales, ii, 1878, p. 359, and vi, 1881, p. 30. *Id.*, Klunzinger, Sitzb. Akad. Wiss. Wien, lxxx, i, 1879, p. 393.

Blanchardia maculata, Castelnau, Res. Fish. Austr. (Viet. Offic. Rec. Philad. Exhib.), 1875, p. 47. *Id.*, Macleay, Proc. Linn. Soc. N. S. Wales, vi, 1881, p. 272. *Id.*, Ogilby, Mem. Qld. Mus., i, 1912, p. 216.

D. lxii/1; A. xxxvii/2; V. 1; P. 19; C. 10. The length from the snout to the vent is 1.1 in the distance between the vent and the hypural joint. The head is 2.5 in its distance from the vent. Depth at the vent about 2.1 in the head; orbit 5 in the same. Snout 1.5 in the orbit and greater than the interorbital width, which is 2.7 in the orbit. Pectoral 2.2, caudal 1.5 in the head. Ventral ray almost equal to the orbit in length. Posterior dorsal spine 3.2, and posterior anal spine nearly 4 in the head.

Body anguilliform, somewhat compressed, and covered with minute imbricate scales which extend forward to behind the pectorals and ventrals; the breast and the back above the lateral line are naked. Head subcylindrical, naked, with series of pores surrounding the eye, above the opercles, across the nape, and on the mandibles. Snout obtuse; anterior nostril in a short tube. Mouth nearly horizontal, the maxilla produced backward well beyond the eye; its posterior portion is rather narrow, rounded, and exposed; mandible shorter than the upper jaw, with a small mental barbel. A broad band of granular teeth on each ramus of the jaws, which becomes narrower as it extends backward; the symphyses are naked; a broad band of similar teeth on each palatine, vomer toothless. Tongue slender, largely free. Eye large, its anterior margin free from the orbital membranes. Opercles unarmed, the preopercular margin hidden beneath the skin; suboperculum with oblique ridges. Gill-opening wide, lateral, the membranes broadly attached to the isthmus. Lateral line extending obliquely upward from the operculum to near the back, whence it runs backward to the base of the fourth last dorsal spine; it is formed of a continuous series of enlarged tubules.

Dorsal fin originating above the end of the head; the spines of the greater portion are slender with flexible tips, but they become thicker posteriorly and are acutely pointed; they increase gradually in length to the last; the single ray is branched and longer than the spines, and is united with the caudal. Anal similar in form to the dorsal, commencing below the twenty-eighth spine of that fin; its spines are all strong and acute, and increase in length to the last;